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Shunpei Yamazaki

SEL 297

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EXAMINER

PIZIALI, JEFFREY J

ART UNIT

PAPER NUMBER

2629

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/026,406	<b>Applicant(s)</b> YAMAZAKI ET AL.	
	<b>Examiner</b> JEFF PIZIALI	<b>Art Unit</b> 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2009 and 19 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 2-4, 7-18, 20, 25, 26, 31-62 and 65-67 is/are pending in the application.
- 4a) Of the above claim(s) 2-4, 20, 25, 26, 31-36 and 65-67 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 7-18 and 37-62 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Drawings***

2. The drawings have not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the figures.

### ***Specification***

3. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Election/Restrictions***

4. ***Applicant's election of Invention II (Claims 7-18 and 37-62)*** in the reply filed on *21 September 2009* is acknowledged and appreciated.

Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

5. Restriction to one of the following inventions is required under 35 U.S.C. 121:

1. **Claims 7, 15-18, and 37**, drawn to a first subcombination, classified in class 345, subclass 205 (*i.e., display driving control having circuitry integral with display elements*).
2. **Claims 8 and 38-42**, drawn to a second subcombination, classified in class 340, subclass 815.53 (*i.e., methods of controlling light emitting elements*).
3. **Claims 9, 10, and 43-47**, drawn to a third subcombination, classified in class 345, subclass 691 (*i.e., temporal processing of display driving control signals*).
4. **Claims 11 and 48-52**, drawn to a fourth subcombination, classified in class 313, subclass 510 (*i.e., driving luminescent displays*).
5. **Claims 12 and 53-57**, drawn to a fifth subcombination, classified in class 345, subclass 36 (*i.e., electroluminescent displays*).
6. **Claims 13, 14, and 58-62**, drawn to a sixth subcombination, classified in class 349, subclass 349 (*i.e., electrical excitation of light emitting displays*).

Art Unit: 2629

The inventions are distinct, each from the other because of the following reasons:

6. Inventions ***1-6*** are related as subcombinations disclosed as usable together in a single combination.

The subcombinations are distinct if they do not overlap in scope and are not obvious variants, and if it is shown that at least one subcombination is separately usable.

In the instant case, each of the ***Subcombinations 1-6*** has separate utility such as:

(1) ***Subcombinations 2, 3, 5, and 6***, as claimed, do not require:

*"sequentially writing each bit of n bit digital video signals in each of the n first memories,"* as claimed in independent claim 7 (lines 10-11) of ***Subcombination 1***.

(2) ***Subcombinations 3-6***, as claimed, do not require:

*"the light emitting element emits a light only during a period that starts with the start of the output of the n counter signals and ends as a plurality of first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches a plurality of second information of each of the n counter signals,"* as claimed in independent claim 7 (lines 19-22) of ***Subcombination 1***.

Art Unit: 2629

(3) **Subcombinations 1 and 4**, as claimed, do not require:

*"n first switching thin film transistors,"* as claimed in independent claim 8 (*line 6*);

*"n second switching thin film transistors,"* as claimed in independent claim 8 (*line 7*);

*"sequentially turning on the n first switching thin film transistors to write each bit of n bit digital video signals in each of the n first memories,"* as claimed in independent claim 8 (*lines 12-13*); and

*"turning on the n second switching thin film transistors at once to write each bit of the n bit digital video signals written in each of the n first memories in each of the n second memories at once,"* as claimed in independent claim 8 (*lines 14-16*) of **Subcombination 2**.

(4) **Subcombinations 3-6**, as claimed, do not require:

*"the light emitting element emits a light only during a period that starts with the start of the output of the n counter signals and ends as a plurality of first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches a plurality of second information of each of the n counter signals,"* as claimed in independent claim 8 (*lines 22-26*) of **Subcombination 2**.

Art Unit: 2629

(5) **Subcombinations 1 and 4**, as claimed, do not require:

*"n first switching thin film transistors,"* as claimed in independent claim 9 (line 6);

*"n second switching thin film transistors,"* as claimed in independent claim 9 (line 7);

*"sequentially turning on the n first switching thin film transistors to write each bit of n bit digital video signals in each of the n first memories,"* as claimed in independent claim 9 (lines 13-14); and

*"turning on the n second switching thin film transistors at once to write each bit of the n bit digital video signals written in each of the n first memories in each of the n second memories at once,"* as claimed in independent claim 9 (lines 15-17) of **Subcombination 3**.

(6) **Subcombinations 1, 2, 4, and 5**, as claimed, do not require:

*"a current controlling thin film transistor,"* as claimed in independent claim 9 (line 10) of **Subcombination 3**.

(7) **Subcombinations 1, 2, and 4-6**, as claimed, do not require:

*"the current controlling thin film transistor is turned on by a display signal outputted from the display signal generating portion only during a period that starts with the start of the output of the n counter signals and ends as a plurality of first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches a plurality of second information of each of the n counter signals, and wherein the light emitting element emits a light when the current controlling thin film transistor is turned on,"* as claimed in independent claim 9 (lines 23-29) of **Subcombination 3**.

(8) **Subcombinations 2, 3, 5, and 6**, as claimed, do not require:

*"sequentially writing each bit of  $n$  bit digital video signals in each of the  $n$  first memories," as claimed in independent claim 11 (lines 10-11) of **Subcombination 4**.*

(9) **Subcombinations 1-3**, as claimed, do not require:

*"wherein the display signal generating portion has, a first function of comparing a plurality of first information of each bit of the  $n$  bit digital, video signals inputted to the display signal generating portion with a plurality of second information of each of the  $n$  counter signals inputted to the display signal generating portion to judge whether or not the plurality of first and second information match," as claimed in independent claim 11 (lines 19-24) of **Subcombination 4**.*

(10) **Subcombinations 1-3 and 6**, as claimed, do not require:

*"a second function of making the light emitting element emit a light only during a period that starts with the start of the output of the  $n$  counter signals and ends as the plurality of the first information of each bit of the  $n$  bit digital video signals inputted to the display signal generating portion matches the plurality of the second information of each of the  $n$  counter signals," as claimed in independent claim 11 (lines 25-29) of **Subcombination 4**.*



Art Unit: 2629

(11) **Subcombinations 1 and 4**, as claimed, do not require:

*"n first switching thin film transistors," as claimed in independent claim 12 (line 6);*

*"n second switching thin film transistors," as claimed in independent claim 12 (line 7);*

*"sequentially turning on the n first switching thin film transistors to write each bit of n bit digital video signals in each of the n first memories," as claimed in independent claim 12 (lines 12-13); and*

*"turning on the n second switching thin film transistors at once to write each bit of the n bit digital video signals written in each of the n first memories in each of the n second memories at once," as claimed in independent claim 12 (lines 14-16) of **Subcombination 5**.*

(12) **Subcombinations 1-3**, as claimed, do not require:

*"wherein the display signal generating portion has, a first function of comparing a plurality of first information of each bit of the n bit digital, video signals inputted to the display signal generating portion with a plurality of second information of each of the n counter signals inputted to the display signal generating portion to judge whether or not the plurality of first and second information match," as claimed in independent claim 12 (lines 22-27) of **Subcombination 5**.*

Art Unit: 2629

(13) **Subcombinations 1-3 and 6**, as claimed, do not require:

*"a second function of making the light emitting element emit a light only during a period that starts with the start of the output of the  $n$  counter signals and ends as the plurality of the first information of each bit of the  $n$  bit digital video signals inputted to the display signal generating portion matches the plurality of the second information of each of the  $n$  counter signals," as claimed in independent claim 12 (lines 28-32) of **Subcombination 5**.*

(14) **Subcombinations 1 and 4**, as claimed, do not require:

*" $n$  first switching thin film transistors," as claimed in independent claim 13 (line 6);*

*" $n$  second switching thin film transistors," as claimed in independent claim 13 (line 7);*

*"sequentially turning on the  $n$  first switching thin film transistors to write each bit of  $n$  bit digital video signals in each of the  $n$  first memories," as claimed in independent claim 13 (lines 13-14); and*

*"turning on the  $n$  second switching thin film transistors at once to write each bit of the  $n$  bit digital video signals written in each of the  $n$  first memories in each of the  $n$  second memories at once," as claimed in independent claim 13 (lines 15-17) of **Subcombination 6**.*

(15) **Subcombinations 1, 2, 4, and 5**, as claimed, do not require:

*"a current controlling thin film transistor," as claimed in independent claim 13 (line 10) of **Subcombination 6**.*

Art Unit: 2629

(16) **Subcombinations 1-3**, as claimed, do not require:

*"wherein the display signal generating portion has, a first function of comparing a plurality of first information of each bit of the n bit digital video signals inputted to the display signal generating portion with a plurality of second information of each of the n counter signals inputted to the display signal generating portion to judge whether or not the plurality of first and second information match," as claimed in independent claim 13 (lines 23-28) of **Subcombination 6**.*

(17) **Subcombinations 1, 2, 4, and 5**, as claimed, do not require:

*"a second function of turning on the current controlling thin film transistor only during a period that starts with the start of the output of the n counter signals and ends as the plurality of the first information of each bit of the n bit digital video signals inputted to the display signal generating portion matches the plurality of the second information of each of the n counter signals, wherein the light emitting element emits a light when the current controlling thin film transistor is turned on," as claimed in independent claim 13 (lines 29-35) of **Subcombination 6**.*

See MPEP § 806.05(d). The examiner has required restriction between subcombinations usable together.

Where applicant elects a subcombination and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a).

Art Unit: 2629

Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

7. Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

- (a) the inventions have acquired a separate status in the art in view of their different classification;
- (b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;
- (c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);
- (d) the prior art applicable to one invention would not likely be applicable to another invention;
- (e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a invention to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.**

Art Unit: 2629

The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

8. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Piziali whose telephone number is (571) 272-7678. The examiner can normally be reached on Monday - Friday (6:30AM - 3PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chanh Nguyen can be reached on (571) 272-7772. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeff Piziali/  
Primary Examiner, Art Unit 2629  
30 November 2009